

What is claimed is:

1. A system having two or more sensors, each sensor having a transmitter and a receiver for signals and one sensor being able to receive a cross echo signal of another sensor, wherein the sensors in receive mode are temporally separated from one another by the time delay of the transmission and reception signals.
2. The system as recited in Claim 1, wherein the system is a radar system having two or more communicating radar sensors (10), an optical system having two or more communicating optical sensors, or an ultrasound system having two or more communicating ultrasound sensors.
3. The radar system as recited in Claim 1 or 2, wherein each of the radar sensors (10) is pulsed in particular using a low repetition frequency  $f_w$ .
4. The radar system as recited in Claim 2 or 3, wherein a carrier signal modulated by a PN code using ASK, PSK, BPSK, FSK or a combination of these modulation types is used for the transmission signals of the radar sensors (10).
5. The radar system as recited in one of Claims 3 or 4, wherein each of the radar sensors (10) monitors a distance range  $[r_a; r_b]$  to be monitored from the interval  $[0 \text{ m}; R_{\max}]$  where:  $0 \text{ m} \leq r_a \leq r_b \leq R_{\max}$ .
6. The radar system as recited in one of Claims 3 through 5, wherein  $n$  radar sensors (10) transmit simultaneously, without interruption an appropriately modulated transmission signal (pulse, PN-BPSK).
7. The radar system as recited in one of the preceding claims, wherein the first radar sensor receives the cross echoes of the  $n-1$  additional communicating radar sensors (10) in the distance ranges  $[c / (2t_{s2...n}) + r_a; c / (2t_{s2...n}) + r_b]$ .
8. The radar system as recited in one of the preceding claims, wherein a self-echo signal and  $(n-1)$  cross echo signals are evaluated simultaneously

and/or sequentially in a radar sensor (10), in particular when simultaneous evaluation of a plurality of receivers (15) is provided.